

NEW Surface Accuracy Guaranteed Mirror | SAGM



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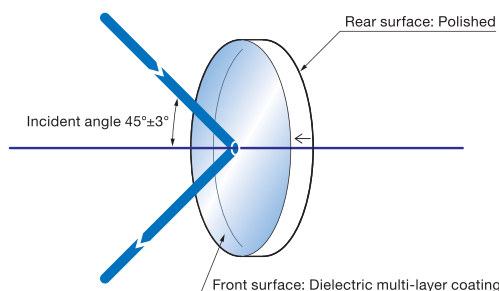
Holder & Vibration isolator

A mirror with high surface accuracy is realized by optimizing the conditions of the substrate material, thickness and coating. A surface accuracy of $\lambda/10$ after coating is guaranteed.

- A surface accuracy (after coating) higher than that of existing dielectric multi-layer flat mirrors (TFM) can be obtained.
- The rigidity of the product is increased by using Synthetic fused silica as the substrate and also by having it thickened.
- Our product line-up includes mirrors with high reflection that rates accordingly to each individual wavelength of ultra-violet, YAG and other lasers.

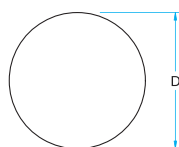


Schematic



Outline Drawing

(in mm)



- Tolerance Diameter $D_{-0.1}$
- Thickness $t \pm 0.1$

Specifications

Material	Synthetic fused silica
Coating	Dielectric multi-layer coating
Incident angle	$45^\circ \pm 3^\circ$
Surface Flatness	$\lambda/10$
Parallelism	$< 3'$
Surface Quality (Scratch-Dig)	10-5
Clear aperture	80% of external diameter
Rear Surface	Polished

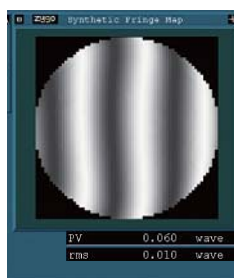
Guide

- ▶ HTFM-MHG for which a mirror is attached to the holder and surface accuracy is guaranteed are also available. [Reference](#) C014
- ▶ Please contact our International Sales Division for customized products. (customized on outer diameter, wavelength characteristic, etc.) Please use the inquiry sheet. [Reference](#) C036

Attention

- ▶ No surface accuracy guarantee data is attached with the product. If you need the sheet containing the surface accuracy guarantee data, an additional cost for creating the data is required. Please contact the sales representative.
- ▶ For the dielectric multi-layer film, the reflection rate wavelength characteristics vary depending on the polarization state of the incident beam. The reflection rate of P polarization is lower than that of S polarization and the reflection band is narrow.
- ▶ The reflection rate shown in the specifications represents the average value of the reflection rate of P polarization and S polarization.
- ▶ If the product is used without setting the angle of incidence to 45 degrees, the reflection rate may decrease.
- ▶ If the product is not used at an applicable wavelength, the reflection rate may decrease.

Surface Accuracy Data (reference data)



- Surface accuracy measurement method: Measured with Zygo laser interferometer
- Surface accuracy measurement wavelength 632.8nm
- Surface accuracy guaranteed temperature $23^\circ\text{C} \pm 2^\circ\text{C}$

248 - 308nm

Part Number	Wavelength Range [nm]	Diameter D [mm]	Thickness t [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm ²]
SAGM-12.7C08-248	248	φ12.7	8	>99.2	2
SAGM-25.4C08-248	248	φ25.4	8	>99.2	2
SAGM-30C08-248	248	φ30	8	>99.2	2
SAGM-50C11-248	248	φ50	11	>99.2	2
SAGM-50.8C11-248	248	φ50.8	11	>99.2	2
SAGM-12.7C08-266	266	φ12.7	8	>99.2	2
SAGM-25.4C08-266	266	φ25.4	8	>99.2	2
SAGM-30C08-266	266	φ30	8	>99.2	2
SAGM-50C11-266	266	φ50	11	>99.2	2
SAGM-50.8C11-266	266	φ50.8	11	>99.2	2
SAGM-12.7C08-308	308	φ12.7	8	>99.5	2
SAGM-25.4C08-308	308	φ25.4	8	>99.5	2
SAGM-30C08-308	308	φ30	8	>99.5	2
SAGM-50C11-308	308	φ50	11	>99.5	2
SAGM-50.8C11-308	308	φ50.8	11	>99.5	2

* Laser pulse width 10ns, repetition frequency 20Hz

Compatible Optic Mounts

KMH-MP12.7-NL / KMH-MP25-NL, HS25-NL / KMH-MP30-NL, HS30-NL / KMH-MP50-NL / KMH-MP50.8-NL

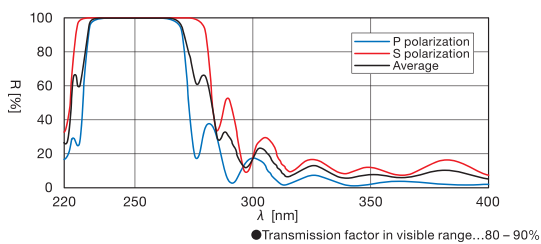
355 – 1064nm					
Part Number	Wavelength Range [nm]	Diameter D [mm]	Thickness t [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm ²]
SAGM-12.7C08-355	355	φ12.7	8	>99.5	5
SAGM-25.4C08-355	355	φ25.4	8	>99.5	5
SAGM-30C08-355	355	φ30	8	>99.5	5
SAGM-50C11-355	355	φ50	11	>99.5	5
SAGM-50.8C11-355	355	φ50.8	11	>99.5	5
SAGM-12.7C08-532	532	φ12.7	8	>99.5	7
SAGM-25.4C08-532	532	φ25.4	8	>99.5	7
SAGM-30C08-532	532	φ30	8	>99.5	7
SAGM-50C11-532	532	φ50	11	>99.5	7
SAGM-50.8C11-532	532	φ50.8	11	>99.5	7
SAGM-12.7C08-1064	1064	φ12.7	8	>99.5	20
SAGM-25.4C08-1064	1064	φ25.4	8	>99.5	20
SAGM-30C08-1064	1064	φ30	8	>99.5	20
SAGM-50C11-1064	1064	φ50	11	>99.5	20
SAGM-50.8C11-1064	1064	φ50.8	11	>99.5	20

* Laser pulse width 10ns, repetition frequency 20Hz

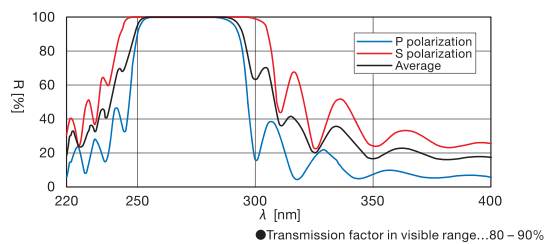
Typical Reflectance Data

R: Reflectance

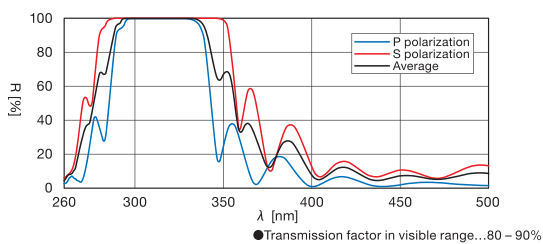
SAGM-248 [Kr*F]



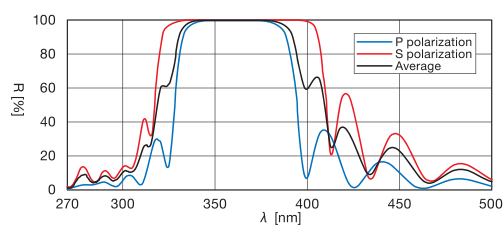
SAGM-266 [YAG4ω]



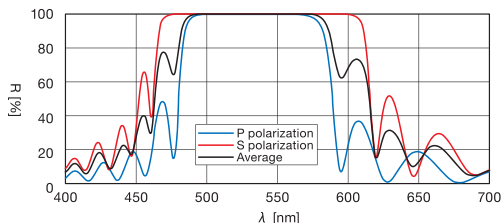
SAGM-308 [Xe*Cl]



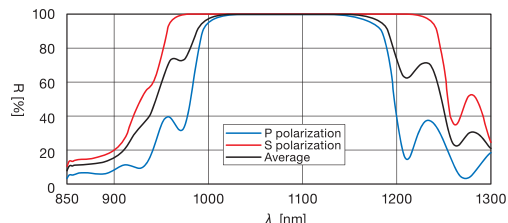
SAGM-355 [YAG3ω]



SAGM-532 [YAG2ω]



SAGM-1064 [YAG]



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